Journal of Magnetic Resonance

EDITOR: Wallace S. Brey, Jr.

EDITORIAL BOARD:

E. Raymond Andrew

Edwin D. Becker

James W. Cooper

B. P. Dailey

P. Diehl

Richard Ernst

Ray Freeman

J. H. Goldstein

David M. Grant

R. K. Harris

K. H. Hausser

Charles S. Johnson, Jr.

J. Jonas

Lowell Kispert

Masaji Kubo

George C. Levy

Ralph Livingston

Bruce McGarvey

Rex E. Richards

Max T. Rogers

Thomas A. Scott

Ian C. P. Smith

J. B. Stothers

Robert L. Vold

Volume 35, 1979



ACADEMIC PRESS
New York and London

A Subsidiary of Harcourt Brace Jovanovich, Publishers

Copyright © 1979 by Academic Press, Inc.

All Rights Reserved

No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the copyright owner.

The appearance of the code at the bottom of the first page of an article in this journal indicates the copyright owner's consent that copies of the article may be made for personal or internal use, or for the personal or internal use of specific clients. This consent is given on the condition, however, that the copier pay the stated per copy fee through the Copyright Clearance Center, Inc. (Operations Staff, P.O. Box 765, Schenectady, New York 12301), for copying beyond that permitted by Sections 107 or 108 of the U.S. Copyright Law. This consent does not extend to other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works, or for resale. Copy fees for pre-1979 articles are the same as those shown for current articles.

CONTENTS OF VOLUME 35

Number 1, July 1979

Selective Iron(II) Phthalocyanine and Ruthenium(II) Phthalocyanine Shift Reagents	1
IOANNIS M. TAKAKIS AND YORKE E. RHODES. Resolution of Cyclopentanol Methylene Proton Signals with Eu(fod) ₃	13
V. J. Basus, Paul D. Ellis, Howard D. W. Hill, and John S. Waugh. Utilization of Chirp Frequency Modulation with 180°-Phase Modulation for Heteronuclear Spin Decoupling	19
R. O. KÜHNE, T. SCHAFFHAUSER, A. WOKAUN, AND R. R. ERNST. Study of Transient Chemical Reactions by NMR. Fast Stopped-Flow Fourier Transform Experiments	39
D. I. HOULT. The Solution of the Bloch Equations in the Presence of a Varying B_1 Field—An Approach to Selective Pulse Analysis	69
SUSHIL K. MISRA AND PAWEL MIKOLAJCZAK. EPR Measurements on the Gd ³⁺ Ion in Rare-Earth Trichloride Hexahydrate Hosts and Predictions of the Linear Point-Charge Model	87
JOSEPH H. NOGGLE. The Calculation of Nuclear Overhauser Effects in Coupled Spin Systems	95
T. H. DEFRIES AND J. JONAS. NMR Probe for High-Pressure and High-Temperature Experiments	111
$S.\ A.\ FAIRHURST,\ W.\ R.\ McIlwaine,\ {\tt And}\ L.\ H.\ Sutcliffe.\ EPR\ Spectra\ of\ Sulfur-33-Labeled\ Dimethoxybenzonorbornyl\ Thiyl\ Free\ Radicals\ .$	121
KAZUO MUKAI, HIDEO SHIKATA, NAGAO AZUMA, AND KEIJI KUWATA. ELDOR Studies of 1,3,5-Triphenylverdazyl and 1,5-Diphenyl-3-(4-chlorophenyl)verdazyl Radicals	133
RICHARD BRAMLEY, A. E. PEPPERCORN, AND M. J. WHITTAKER. Simultaneous Nitrogen-14 and Cobalt-59 Decoupling from Protons	139
S. K. GARG, J. A. RIPMEESTER, AND D. W. DAVIDSON. Analysis of NMR Lineshapes of Rigid-Lattice Multispin Systems. I. Proton Resonance	145
Communications	
R. HENTSCHEL AND H. W. SPIESS. Deuterium Fourier Transform NMR in Solids and Solid Polymers	157

BEN G. J. M. BOLSCHER, JOHANNES A. LENSTRA, AND ROBERT KAPTEIN. Accessibility of Aromatic Residues of Bovine Pancreatic Ribonuclease as Revealed by Laser Photo-CIDNP	163
A. BAX, A. F. MEHLKOPE, AND J. SMIDT. Homonuclear Broadband- Decoupled Absorption Spectra, with Linewidths Which Are Independent of the Transverse Relaxation Rate	167
H. FUJITA, J. YAMAUCHI, K. MATSUMOTO, H. OHYA-NISHIGUCHI, AND Y. DEGUCHI. An Unusual Hyperfine Splitting in the Anion Radical of Pyridinium Bis(methoxycarbonyl)methylide	171
Number 2, August 1979	
U. HAUBENREISSER AND B. SCHNABEL. Accurate Phase Adjustment for Multiple Pulse NMR of Solids	175
W. B. EULER, L. E. MOHRMANN, JR., AND B. B. GARRETT. Covalency from Quadrupole in ABCl ₃ Systems	185
R. IKEDA, C. A. McDowell, and D. Nakamura. The Proton Magnetic Resonance Lineshapes of Tunnelling NH ₄ ⁺ Ions in an NH ₄ Br Single Crystal at Low Temperatures	193
MICHAEL F. BROWN. Deuterium Relaxation and Molecular Dynamics in Lipid Bilayers	203
J. HOWARD BRADBURY AND ROBERT N. JOHNSON. Assignment of the ¹³ C NMR Spectrum of Biotin	217
K. ROSE AND R. G. BRYANT. The Insignificance of Second Coordination Sphere Interactions in Cobalt-59 NMR Relaxation: A More Precise Assessment	223
A. G. MARSHALL, T. MARCUS, AND J. SALLOS. Solvent Elimination from ¹ H NMR Spectra: Tunable Notch Filter	227
EDWIN BOROSKE, LOTHAR MAYAS, AND KLAUS MÖBIUS. A Molecular Structure Study of Partially Deuterated Succinic Acid by ¹ H and ² H Distant ENDOR	231
M. DECORPS AND F. GENOUD. Perturbation Treatment of a Spin-Hamiltonian Including the M=0 Electronic States Application to the Hyperfine Structure of Triplet State EPR	247
MARK J. NILGES AND R. LINN BELFORD. Electron Paramagnetic Resonance of ⁹⁵ Mo- and ⁹⁷ Mo-Doped Crystals of Tetraphenylarsonium Oxopentaisothiocyanatoniobate(V): Determination of the ⁹⁷ Mo Nuclear	
Quadrupole Tensor	259

COMMUNICATIONS

G. C. CHINGAS, A. N. GARROWAY, R. D. BERTRAND, AND W. B. MONIZ. NMR J Cross-Polarization in Liquids: A Refocusing Method	283
ALWIN KRATOCHWILL. A Simple Procedure for the Calculation of Matrix Elements of Tensor Operators: The Transition Probability Matrix for an ABC Spin System	289
HERMANN E. BLEICH AND JAY A. GLASEL. Modification of a Commercial NMR Spectrometer to Measure Rotating-Frame Spin–Lattice Relaxation. Performance Characteristics	295
RAJ K. GUPTA, GEORGE H. WEISS, JAMES A. FERRETTI, AND EDWIN D. BECKER. A Variable Perturbation Method for Nuclear Spin–Lattice Relaxation Measurements	301
Announcements and News Items	307
Number 3, September 1979	
H. BUDAK, MARIA L. S. GARCIA, IAN C. EWART, IAN J. F. POPLETT, AND JOHN A. S. SMITH. ¹⁴ N and ² H Double-Resonance Studies of Cytosine Hydrobromide	309
N. JURANIĆ, M. B. ĆELAP, D. VUČELIĆ, M. J. MALINAR, AND P. N. RADIVOJŠA. Chemical Shifts in ⁵⁹ Co Nuclear Magnetic Resonance Spectra of Low-Symmetry Ligand Field Co(III) Complex Compounds.	319
PETER STYLES, CHRISTOPH GRATHWOHL, AND FRANCIS F. BROWN. Simultaneous Multinuclear NMR by Alternate Scan Recording of ³¹ P and ¹³ C Spectra	329
GEOFFREY BODENHAUSEN, STEWART P. KEMPSELL, RAY FREEMAN, AND HOWARD D. W. HILL. Spinning Sidebands in Two-Dimensional Spin-Echo Spectra	337
B. LEMARIE AND B. BRAILLON. Analysis of the NMR Spectra of 1,4-Pentadiene: Conformational Study and Interpretation of Coupling Constants Using CNDO/2 and INDO Molecular Orbital Calculations.	343
YOKO KANAZAWA, KEIKO KOGA, AND HIROTAKE KAMEI. Use of a Commercial Waveform Analyzer in a Pulse FT NMR System	353
STEVEN BRUMBY. Numerical Analysis of EPR Spectra. 2. The Use of Significance Plots	357
P. DIEHL AND H. BÖSIGER. The Use of 13 C Satellites in Proton Spectra of Oriented Molecules: The r_{α} -Structure of 1,2,3-Trichlorobenzene	367

A. BAX, A. F. MEHLKOPF, AND J. SMIDT. Absorption Spectra from Phase–Modulated Spin Echoes	373
M. LINDER, A. HÖHENER, AND R. R. ERNST. Proton-Enhanced Carbon-13 Resonance in Helium-Cooled Probe; Chemical Shielding Tensor of Benzene	379
A. Avogadro, G. Bonera, and M. Villa. The Clark Method of Recording Lineshapes	387
S. P. SAWAN, T. L. JAMES, L. D. GRUENKE, AND J. C. CRAIG. Proton NMR Assignments for Cholesterol. Use of Deuterium NMR as an Assignment Aid	409
MUNEKI OHUCHI, TERUAKI FUJITO, AND MAMORU IMANARI. Spin-Lattice Relaxation of Carbon-13 in the Rotating Frame	415
Antal Rockenbauer. The Fermi Contact Hyperfine Interaction in Cupric Complexes	429
THOMAS A. CASE AND HAROLD T. STOKES. Versatile Pulse Sequence Generator for Pulse NMR	439
Communications	
RAY FREEMAN, STEWART P. KEMPSELL, AND MALCOM H. LEVITT. Broadband Decoupling and Scaling of Heteronuclear Spin-Spin Interactions in High-Resolution NMR	447
WELLINGTON S. LEE AND JEROME M. SCHULMAN. Orbital Contributions to the Nuclear Spin-Spin Coupling Constants of Bicyclobutane and Cyclopropane	451
T. N. HUCKERBY. Selective Excitation with Single-Frequency Off-Resonance Decoupling	455
DEVINDER S. GILL, OTTO A. GANSOW, F. J. BENNIS, AND KEVIN C. OTT. The Direct Observation of ¹⁰³ Rh NMR	459
Author Index for Volume 35	463
The Subject Index for Volume 35 will appear in the December 1979 issue as part of a cumulative index for the year 1979.	